Health Science

MOSTRATEC

DEVELOPMENT OF PRODUCTS WİTH MEDİCİNAL VALUE FROM HERBAL WASTES

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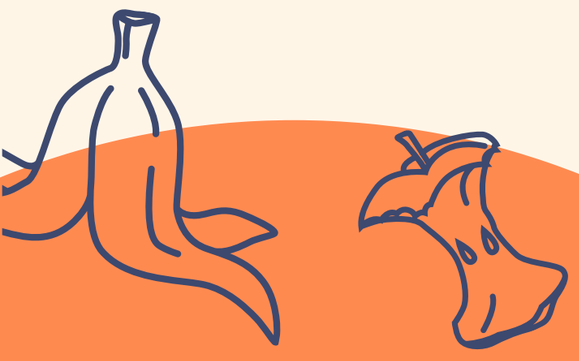
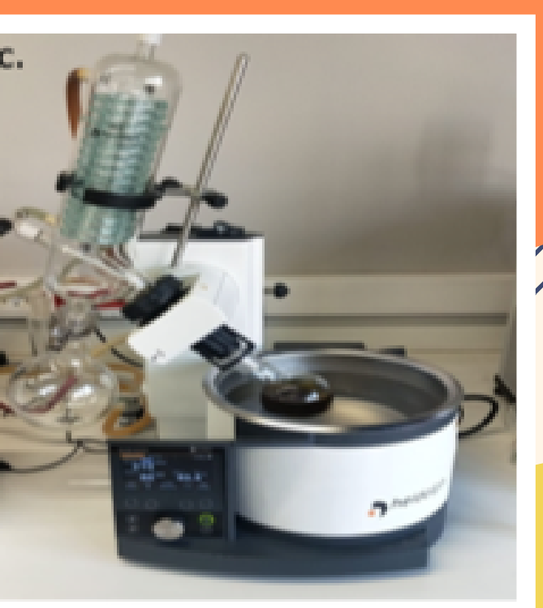
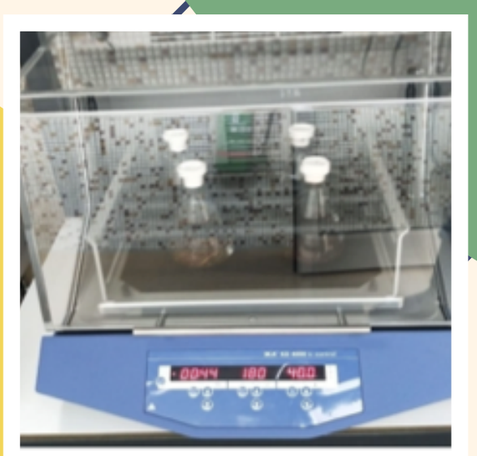


Purpose

Researches are needed to ensure that waste materials are economically easily accessible and that these products can be used in the industrial field. In this study, it is aimed to develop a product with medicinal value from herbal wastes. In the research, Corn and cherry's which are highly preffered in Turkey's agriculture and offered to the consumer in various ways; bioactive components present in waste have been determined. During the research, the extraction of corn tassel and cherry stalk plants were prepared under suitable conditions, and it is aimed to be able to determine phenolic compounds with antioxidant properties. It is known that phenolic compounds have many beneficial properties besides their high antioxidant value. In addition, studies have shown that products with antioxidant capacity provide protection against diseases.
Based on these data, by looking at the antioxidant, phenolic substance determination and DPPH radical scavenging activity of Cherry stalk and Corn tassel which are being considered as waste, it is aimed to prove its antioxidant capacity with data and it is aimed to develop herbal waste as a medical product.



Preparation of DPPH



Total Phenolic Component (mgGAE / 100g) Amounts of Extracts Prepared with Different Solvents in Corn Tassel and Cherry Stalk

Project name (title) : Development of Products with Medicinal Value from Herbal Wastes

Absorbance, Concentration (µg ml-1),% DPPH Reduced and IC50 (mg ml-1) Amounts According to Different Concentrations in Corn Tassel

Determination of Total Phenolic Substance

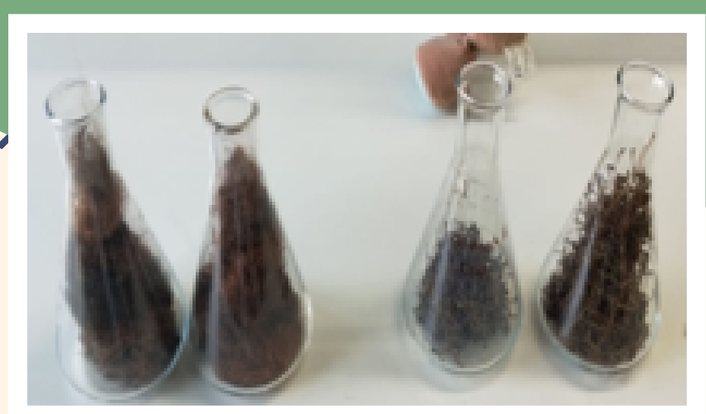
Determination of DPPH Radical Scavenging Efficiency

Conclusion and Discussion

In this study to determine the phenolic compound effect and antioxidant properties of herbal wastes used for medicinal purposes, cherry stalk and corn stigmas were used. These herbal wastes were prepared in different solvents (ethyl acetate, metha nol), and the total antioxidant and phenolic substance determination was determined. The results for the total phenolic compound and antioxidant capacities were observed to be consistent when compared with the studies performed, but it was observed that there were differences with the results of some studies. It was observed that the solvent used in preparing the extraction was different, the temperature and the time spent were effective in these differences. It is understood that the differences in the level of solvent used cause differences in the end.

As a result, it was determined that corn tassel and cherry stalk extracts prepared with ethyl acetate from plant wastes used in this study are important and powerful sources in terms of obtaining natural antioxidants and phenolic compounds with low economic value, which can be used in foods, compared to corn tassel and cherry stalk extracts prepared with methanol. When the analysis results were examined, it was seen that corn tassel had the highest amount of total phenolic compound. It was determined that phenolic compound has low data in cherry stalk. When the antioxi dant activity values were examined, it was determined that cherry stalk had high data, whereas corn tassel had lower data. Considering the results obtained and the current studies, it was observed that the herbal wastes were evaluated and they could be used as herbal wastes with medicinal value. In this context, it was understo od that plants with high economic value and considered as medical waste have an important place with their antioxidant capacities and phenolic compound data deter mined as a result of the study. In this study, it has been observed that waste materi als resulting from food processing are a powerful and important source of natural antioxidants and that plant wastes have antioxidant properties.

Preparation of Ethyl Acetate and Methanol Extract



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